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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/064,798	08/19/2002	Hsiu-O Hsu	9051-US-PA	4096

31561 7590 09/10/2003

JIANQ CHYUN INTELLECTUAL PROPERTY OFFICE
7 FLOOR-1, NO. 100
ROOSEVELT ROAD, SECTION 2
TAIPEI, 100
TAIWAN

EXAMINER

CHOI, JACOB Y

ART UNIT PAPER NUMBER

2875

DATE MAILED: 09/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/064,798

Applicant(s)

HSU, HSIU-O

Examiner

Jacob Y Choi

Art Unit

2875

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 August 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 August 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The spacing of the lines of the specification is such as to make reading and entry of amendments difficult. New application papers with lines double spaced on good quality paper are required.

Claim Objections

2. The claims are objected to because the lines are crowded too closely together, making reading and entry of amendments difficult. Substitute claims with lines one and one-half or double spaced on good quality paper are required. See 37 CFR 1.52(b).

Claims 3 & 6 are objected to because of the following informalities: claim 3 contains a spelling error, correct "firt" to "first", claim 6 contains redundant wording --"between the the light-emitting diodes" should be corrected as "between the light-emitting diodes". Appropriate correction is required.

Drawings

3. Figures 1-4 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the forested surface must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-4, & 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Sato (USPN 5,639,158).

Regarding claim 1, Sato discloses a printed circuit board (1), on which a plurality of electrodes are formed (2), a plurality of light-emitting diodes (2) disposed on the printed circuit board and electrically coupled together, and at least one light-collecting column (3), disposed over the printed circuit board (1), and covering the light-emitting diodes (2), wherein the a surface of the light-collecting column has a plurality of first regions (4a shown in figure 1A) and a plurality of second regions (4b shown in figure 1C), the first regions and the second regions are arranged alternatively on the light-

collecting column, wherein a transmittance for the first regions is smaller than a transmittance for the second regions (figures 2B & 2C), and the first regions are located above the light emitting diodes (figure 1B).

Regarding claim 2, Sato discloses the first region is a forested (dense) surface.

Regarding claim 3, Sato discloses the first region includes a first ejected material (4a) and the second region includes a second ejected material (4b).

Regarding claim 4, Sato discloses a printed circuit board (1), on which a plurality of electrodes are formed (LED / inherent), a plurality of light-emitting diodes (2) disposed on the printed circuit board (1) and electrically coupled together, at least one light-collecting column (3), disposed over the printed circuit board, and covering the light-emitting diodes, and a plurality of reflection boards (4a & 4b), disposed between the light-emitting diodes and the printed circuit board, so as to enhance a brightness at a region between the light emitting diodes (figures 2B & 2C).

Regarding claim 6, Sato discloses the reflection boards are used to reflect an incident light to region between the light-emitting diodes.

6. Claims 4-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Suzuki et al. (USPN 5,580,156).

Regarding claim 4, Suzuki et al. discloses a printed circuit board (11), on which a plurality of electrodes are formed (LED / inherent), a plurality of light-emitting diodes (13) disposed on the printed circuit board (11) and electrically coupled together, at least one light-collecting column (4), disposed over the printed circuit board, and covering the

light-emitting diodes (13), and a plurality of reflection boards (22), disposed between the light-emitting diodes (13) and the printed circuit board (11), so as to enhance a brightness at a region between the light emitting diodes (figures 6-8).

Regarding claim 5, Suzuki et al. discloses each of the reflection boards comprise a plurality of reflection surfaces (figures 4 & 5).

Regarding claim 6, Suzuki et al. discloses the reflection boards are used to reflect an incident light to region between the light emitting diodes.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kelly (USPN 6,450,664) – linear illumination unit having plurality of LEDs

Ono (USPN 6,513,950) – signal lamp having LEDs lens, and reflectors and related method of use

You et al. (USPN 5,833,355) – LED illuminated lamp assembly

Hochstein (USPN 5,857,767) – thermal management system for LED arrays

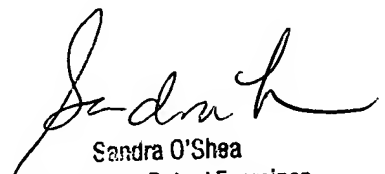
Mouyard et al. (USPN 4,254, 453) - alpha-numeric display array and method of manufacture

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jacob Y Choi whose telephone number is (703) 308-4792. The examiner can normally be reached on Monday-Friday (10:00-7:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on (703) 305-4939. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-7724.

JC



Sandra O'Shea
Supervisory Patent Examiner
Technology Center 2800